



NATIONAL GEOSPATIAL
ADVISORY COMMITTEE



May 2022

Urban Planning in the Time of Climate Change (Why do we still live here?)

The (Greater New Orleans) Regional Planning Commission
for
Jefferson, Orleans, St. Bernard, Plaquemines, St. Charles, St. John the
Baptist, St. Tammany, and Tangipahoa Parishes

REGIONAL PLANNING COMMISSION

We are what others call a COG (Council of Governments), 1 TMA and 3 smaller MPO areas combined into one organization that also handles EPA, EDA and DOE grants as well. We are also co-housed with traffic engineers for LA DOTD.

PROGRAM AREAS

Land Use
Transportation
Environment
Economic Dev
RTMC/ITS
Regional GIS



- RPC is an open forum for elected officials, community leaders, citizens, and other interested parties to discuss the *Big Picture* and promote the general welfare and prosperity of the entire region.
- RPC as the Metro-New Orleans MPO (Metropolitan Planning Organization), in cooperation with LaDOTD, selects projects and sets priorities for federal transportation investments within urban areas.
- RPC ensures federal funds (Federal Highway – FHWA and Federal Transit – FTA) are spent within a continuing, cooperative, and comprehensive planning process.

Our Focus Geographically

Freight Flows by Highway, Railway, and Waterway: 2018



NOTE: Highway flows depicted in this map are based on the Freight Analysis Framework (FAF) data for 2015—the latest year for which the FAF network flow data is available.

SOURCES: Highway—U.S. Department of Transportation, Bureau of Transportation Statistics and Federal Highway Administration, Freight Analysis Framework, version 4.3.1, 2015. Rail—Based on Surface Transportation Board, Annual Carload Waybill Sample and rail freight flow assignment done by Oakridge National Laboratory, 2018. Inland Waterways—U.S. Army Corps of Engineers, Institute of Water Resources, Annual Vessel Operating Activity and Lock Performance Monitoring System data, 2018.

RPC Region and Urban Population

55.6% of the Regional Area is Water



2010 CENSUS URBANIZED AREAS

| <i>PLACE NAME (geography for UZA's will change in 2022)</i> | <i>2020 POP</i> |
|--|--|
| New Orleans south shore urban (population change 2010 to 2020) | 950,224 5.62% |
| Slidell urban (population change 2010 to 2020) | 93,503 2.58% |
| Mandeville/Covington urban (population change 2010 to 2020) | 102,501 15.27% |
| Hammond/ Ponchatoula urban (population change 2010 to 2020) | 70,641 4.45% |
| Total Living in RPC Urbanized Areas | 1,216,869 6.05% |
| Total Living in RPC 8 Parish Area | 1,384,810 29.73% of State Population 2020 |

DENSITY CHANGES

Major Metropolitan Area Density decrease of 30% post-Katrina

Change in Density (Pop. / Sq. Mi.)

| Density | N.O. | Mand./Cov. | Slidell | S. Tang. |
|------------|--------|------------|---------|----------|
| 2000 | 5,077 | 1,352 | 1,395 | N/A |
| 2010 | 3,583 | 1,365 | 1,523 | 885 |
| % Δ | -29.4% | +1% | +9.2% | N/A |

N.O. Southshore – Less people, larger area, significantly lower density than Pre-Katrina

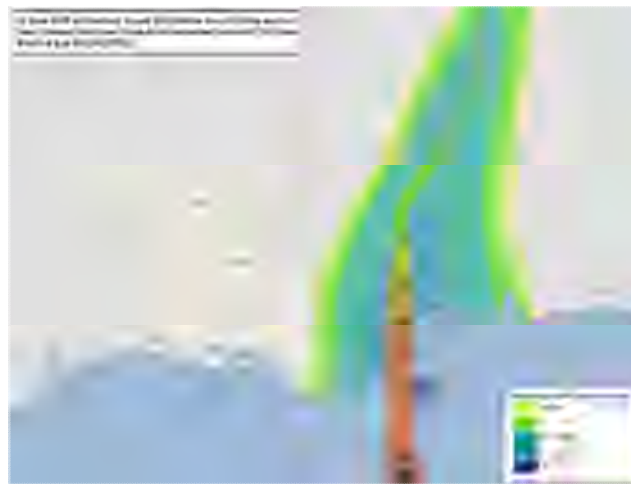
Mand./Cov. – More people, larger area, equal density

Slidell – More people, same area, higher density

Hammond/Pon– Least dense, but now it is an urbanized area

2005 | DEVASTATION

In all, **Hurricane Katrina** claimed 1,833 lives and at \$161 billion is considered the costliest hurricane in U.S. history. The Federal Emergency Management Agency called it "the single most catastrophic natural disaster in U.S. history." Aug 27, 2020

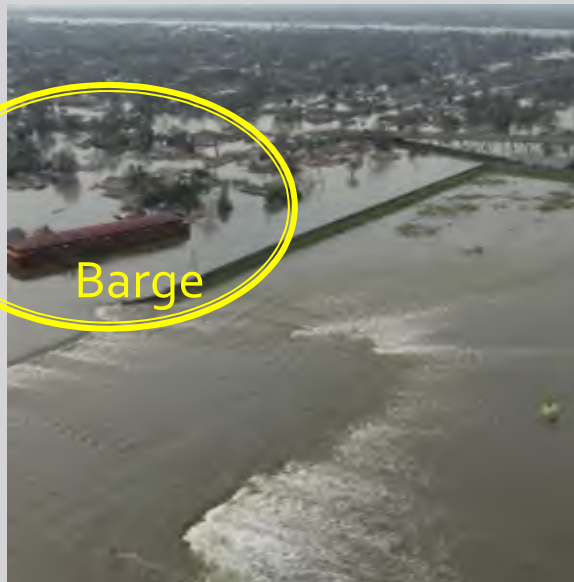


Storm Surge

Gulf Intracoastal Waterway under
Paris Road Bridge - This
Person shouldn't be
here taking a photo!



Lower 9th Ward
Industrial Canal
Breach



I-Walls Failed on Interior Canals – not the Earthen Levees

LEVEES BREACHED

- 53 I – wall/levee breaches in the region

EXTENSIVE FLOODING

- >80% flooding in city



LEVEES & FLOODING

ACTUAL FLOODING

- Standing water for up to 21 days



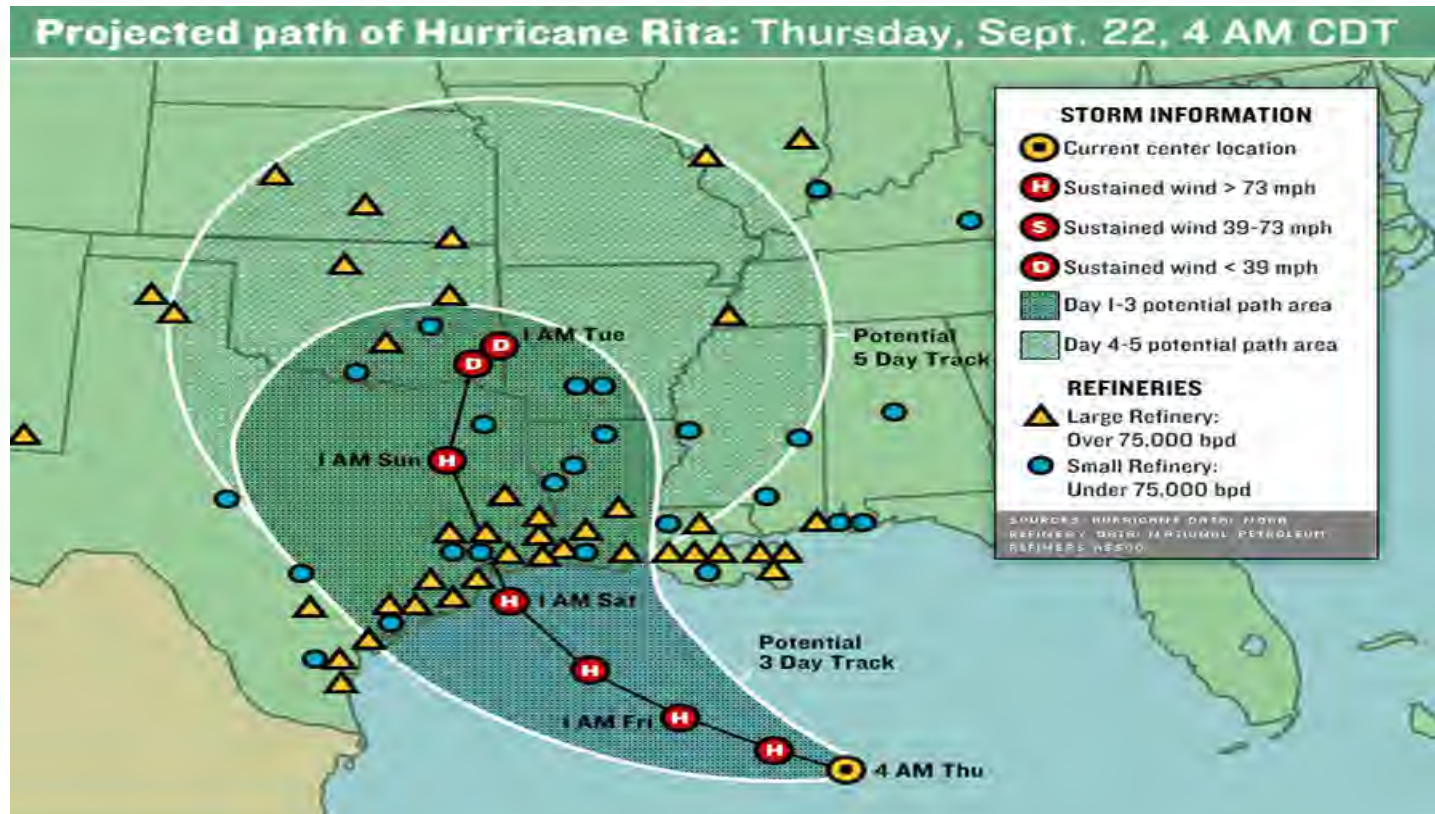
FLOODING FROM OVERTOPPING



International Impacts on Energy & Movement of Goods

2005 – Hurricanes Katrina & Rita

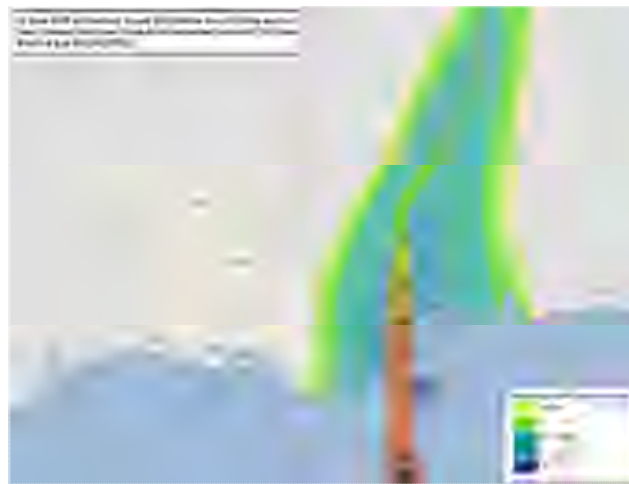
OIL & GAS CORRIDOR OFFSHORE



Tracking for Recovery & Decision-Making

It takes a very long time to rebuild a major metropolitan area.

Determine Priorities for habitation: traffic control, wild animal/rodent control, water, sewerage, electricity, secure walls, access to food & gas

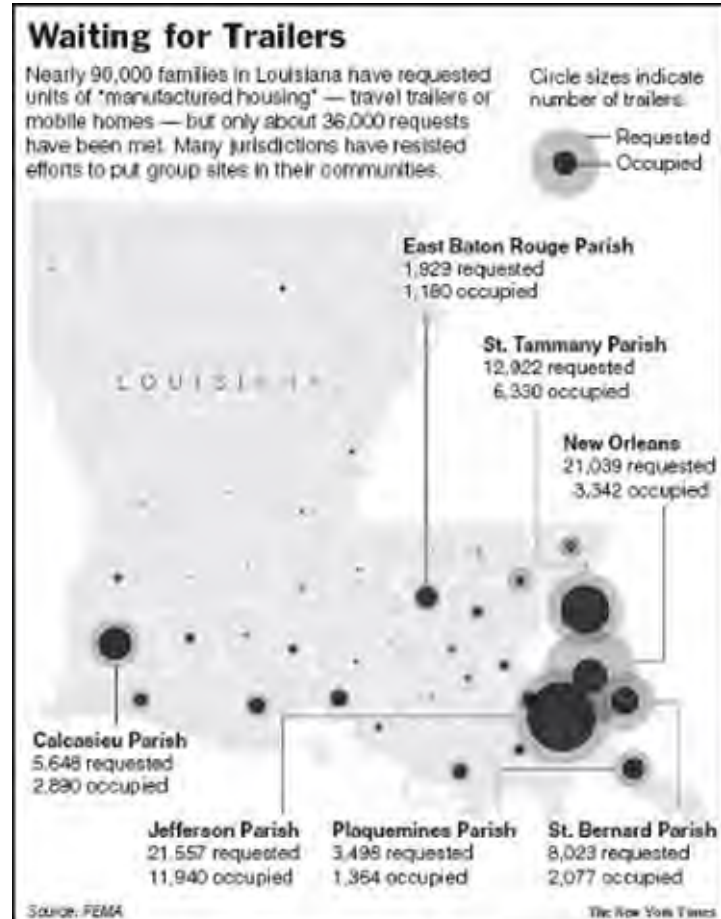


Questions Residents Needed to Answer

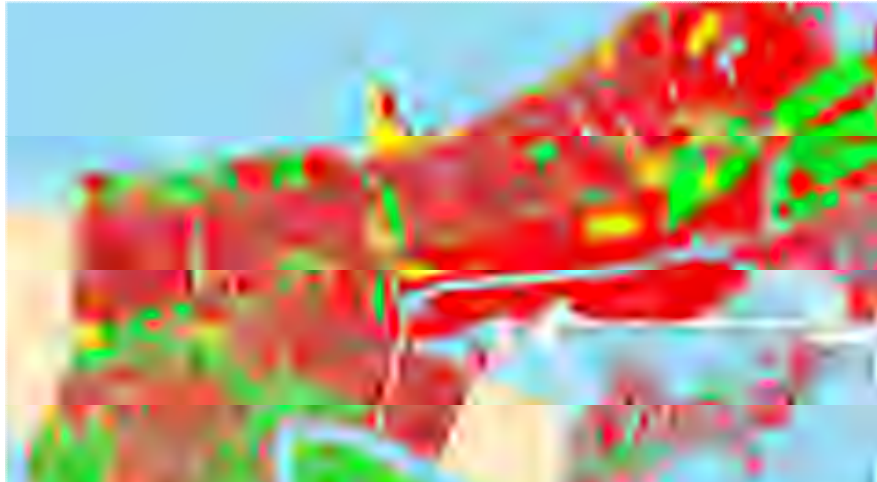
Do You Come Home or Do you Find another Place to Live?



Do You have a temporary place to live where you feel safe?
How long can you stay there?
Are you well enough to return to an area with limited health services?
Do you have children who need to be in schools?
Do you have ample resources to live in a very stressful environment?



TRACKING Redevelopment ACTIVITY - Setting Priorities for Infrastructure Replacement Based Upon Utility Activity, Road Home Options, Permits



GCR Inc. Electrical Utility Index 2006
used as a part of the Activity Index for
RPC Population Projections

RPC Road Home Applicant Options
St. Bernard Parish 2008



Tracking Building and Demolition
permits 2006 through 2015



Submerged Roads + Paths to Progress

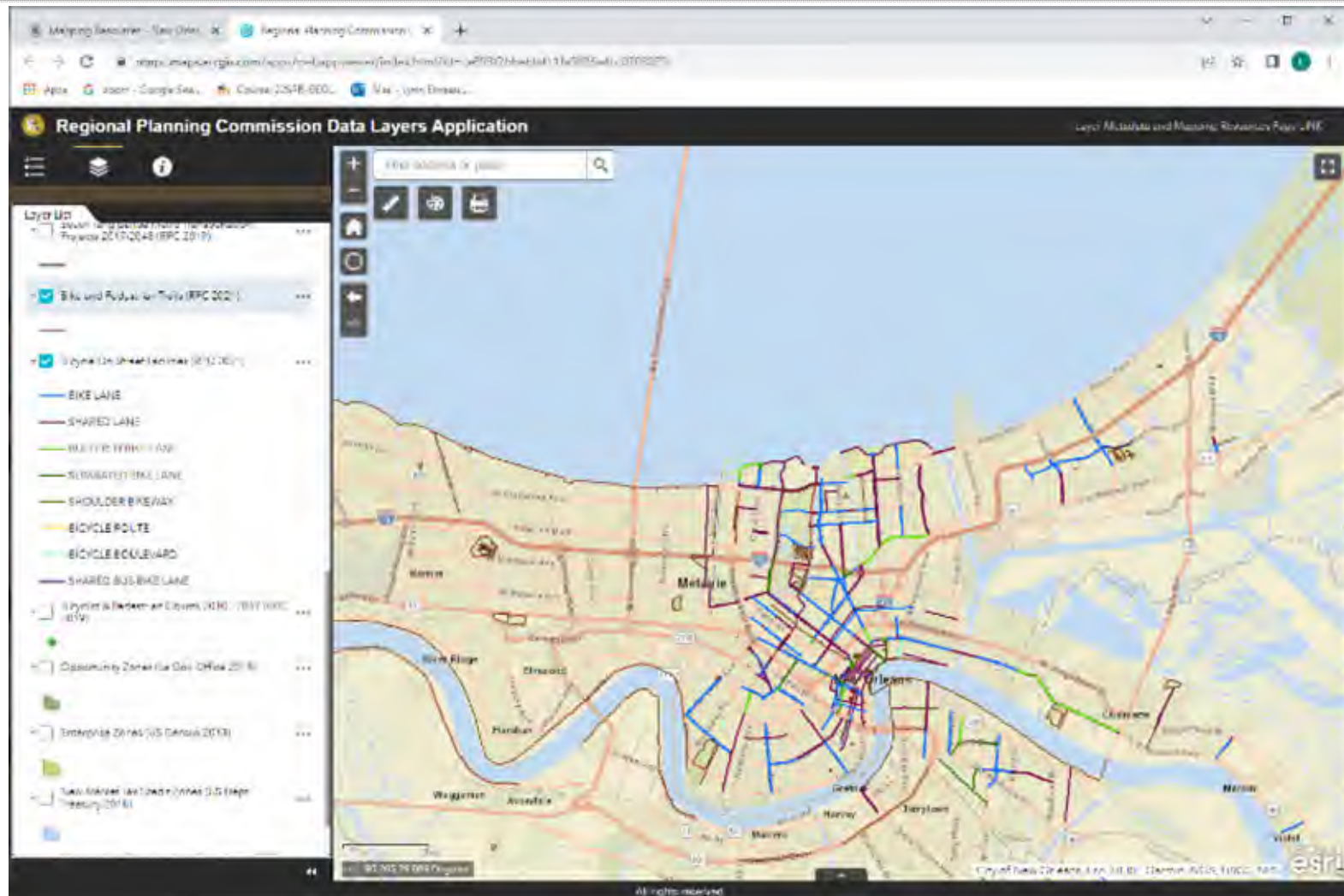
110+ roadway
segments in
Jefferson, Orleans,
and St. Bernard
Parishes
\$200M in repairs

Making Opportunities with Redevelopment What is FHWA and What is Handled by FEMA



ADA AND BIKE AMENITIES

Opportunities from Reconstruction – Build Back Better



Tracking Employment



- Tourism
- Creative Media & Design
- Food Manufacturing, Food Processing and Fishing
- Recovery & Redevelopment
- Energy Production, Petrochemicals & Plastics
 - Energy
 - Petrochemicals & Plastics
- Green and Environmental Technology
- Aerospace & Advanced Manufacturing
- International Trade Logistics
- Higher Education
- Healthcare Delivery & Biosciences

Tracking Land Use Regionally

40 acre grid summary of land use data

Existing

Future

Legend

TIP/MTP 2014 - 2044 Projects to Date

- TIP - 2014 -2018
- Tier II - 2019 - 2027
- Tier III - 2028 - 2043)

RPC Future Land Use Base - 40 Acre Grid

LandUse

- G1 - Conservation
- G2 - Suburban Min Change
- G3 - Town Centers
- G4 - Suburban Change
- G5 - Urban Min Change
- G6 - Urban Change
- O1 - Preserved Open Space
- O2 - Reserved Open Space
- Regional State Park Lands, Refuges, State Lands 2011
- G7 - Centers
- G7 - Major Regional Corridors
- Pumpstations, Corps 2005
- IPET Flood Control Structures Corps 2008
- Levee System Corps 2008

HURRICANE PREPAREDNESS

Fortress New Orleans



LAND USE | PLANNING |

conceptual planning to construction

“L'avenir, tu n'as point à le prévoir mais à le permettre.”
-Antoine de Saint-Exupéry

Allowing the Future to happen



Southeast Louisiana Veterans Health Care System Replacement Medical Center Project

**Biotech/medical Hub serving the southeast, Caribbean
and South American populations**

**Shared Medical
Facilities (VA & LSU
Med) Approximately
30-acre site
Construction
complete in 2018**

**Bioinnovation
Center: 66,000
square feet of state
of the art wet-lab,
office and
conference space
Complete Spring
2011**



COMPLETE STREETS

MAGAZINE STREET & HIGGINS STREET

- Part of the National World War II Museum



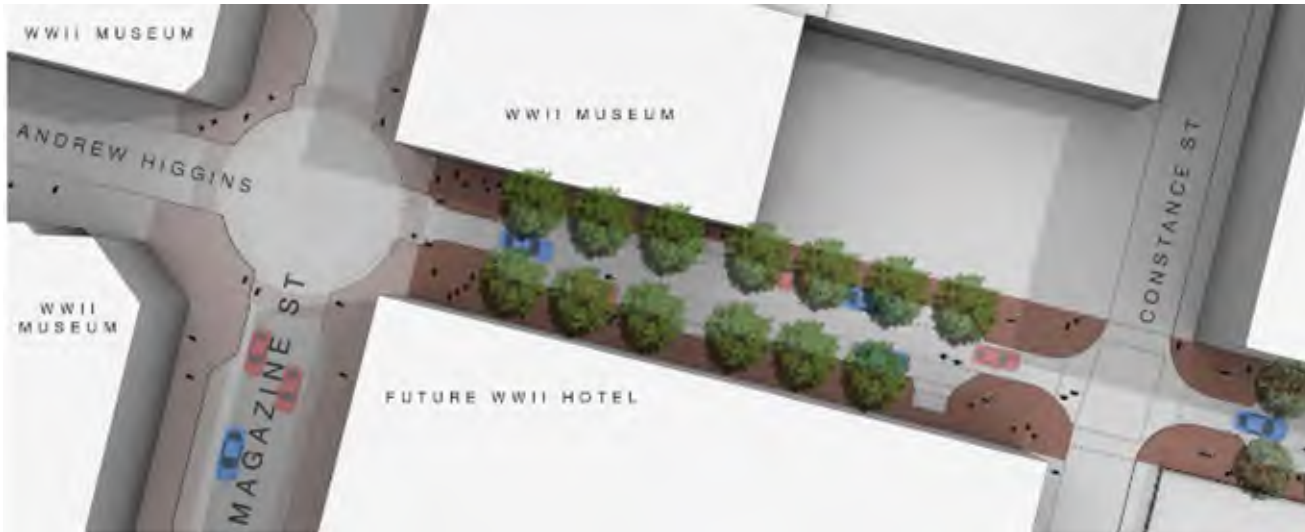
TULANE AVENUE

- Promotes sustainability with new streetscape



Andrew Higgins Corridor Improvement Study

Magazine Street to Constance Street (Block by Block to Convention Center Blvd)



SMART GROWTH PLANNING EFFORTS

Integrated Multi-modal Corridor Planning

Severn Ave.
Jefferson Parish
Part of Fat City Revitalization



West End Redevelopment Orleans and Jefferson Parishes

Since 2005 RPC funded 3 phases of Redevelopment Smart Growth Studies in coordination with both parishes and stakeholders in levee protection, real estate, land use, zoning, transportation, utilities, marina, park, residential lease holder, the Corps and commercial business in public meeting forums.



Andrew Higgins Corridor Improvement Study | Preserving Historic Character

Character Analysis: Unifying diverse influences



CULTURAL DISTRICT



RESIDENTIAL DISTRICT



DINING AND ENTERTAINMENT DISTRICT



CONVENTION DISTRICT



Downtown (Re)investment

- \$6.5 Billion investment since 2005
- Theater renovations: Saenger, Orpheum, Joy, Civic (and growing)
- 120,000 residents, workers, and visitors daily
- 19,769 hotel rooms
- Restaurants and sidewalk cafes
- Growing residential





PATH NETWORK

LA HWY 61 STREETSCAPE IM

Future Urban Corridor Downtown Laplace

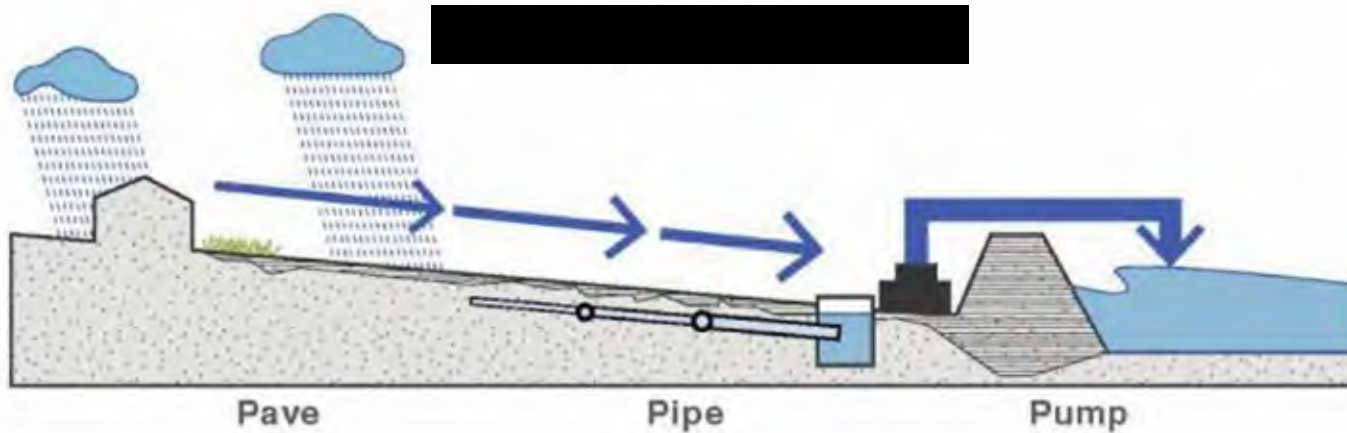


St. John the Baptist Parish

W AIRLINE HWY @ US HWY 51

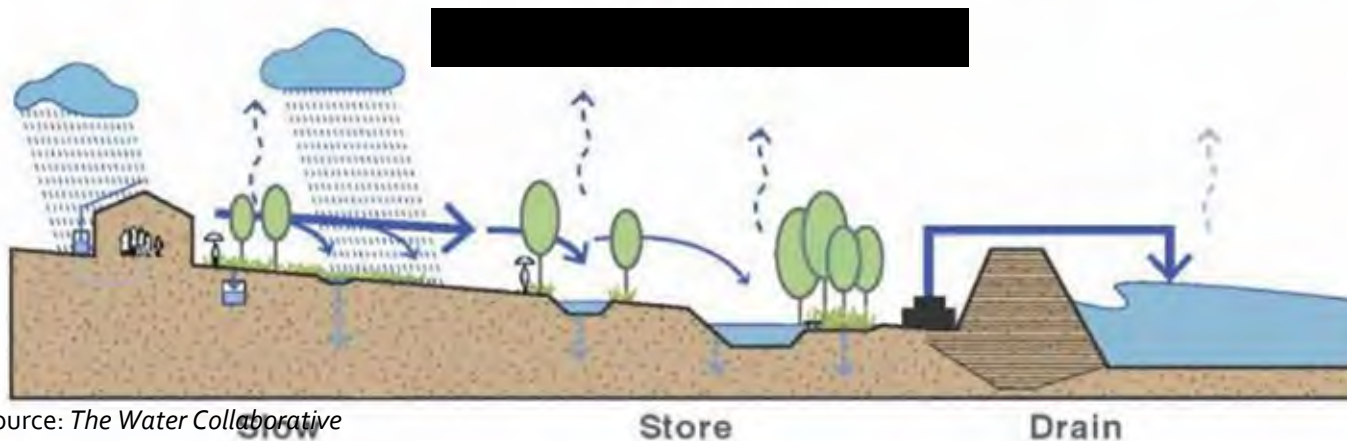


RESILIENCE: Stormwater Management Integrating Green Infrastructure



CURRENT:

Pump all water out before allowing to infiltrate into soil



GREEN INFRASTRUCTURE:

Slow the water, allowing it to infiltrate into the soils. Pump remainder.

RESILIENCE: Stormwater Management

Canal Street
Jefferson Parish



Sunken Gardens

Canal Blvd, New Orleans

Usable space when dry

Useful space when wet

Reduces localized flooding

RESILIENCE: Stormwater Management New Materials, New Specifications



Example from Green Streets Stormwater Management Plan, Milwaukee, WI



Truegrid (Parkway Bakery, NOLA)



Flexipave (Lafreniere Park, Jefferson)

Oakwood Shopping Area Gretna - Hector St.

Bioswale Retention Area



Esplanade Ave. Road Diet

½ of the people will not like your ideas – that means ½ of them might

Previously, confusing two-lane section to one lane with a separate bike lane and on-street parking. Construction complete.

Using Wisner Bike Trail & via the new bridge, Esplanade connects the lake to the river in New Orleans via Wisner.



RESILIENCE: Clean Air Coalition



- Began in August 2014 in preparation for more stringent ozone standards.
- Industry, government, and business stakeholders working to PROACTIVELY reduce ground-level ozone formation from NO_x and VOCs.
- GOAL: Keep region in attainment for ozone

ENVIRONMENTAL PROGRAMS

SOUTHEAST LOUISIANA CLEAN FUEL PARTNERSHIP

- Facilitates partnerships among suppliers, distributors and fleets



BROWNFIELD REDEVELOPMENT PROGRAM

- Technical assistance and distribution of EPA Brownfield funding

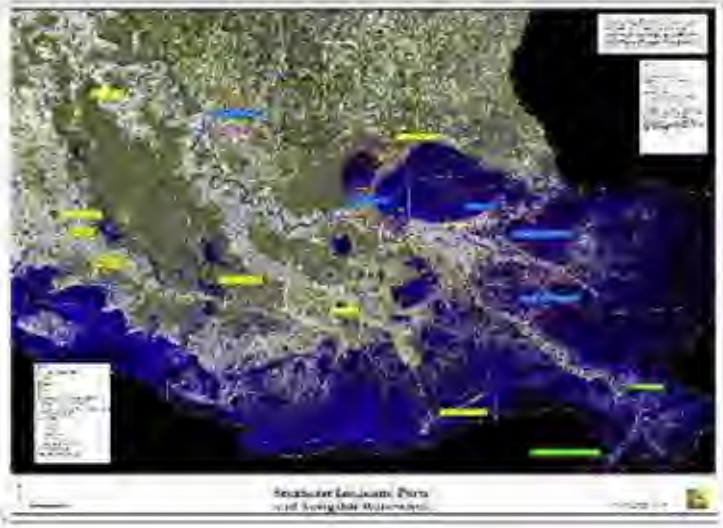




Freight & Port Expansion



Planned Expansion Projects Improving Wharf areas, Intermodal Facilities and Truckway Access. Freight Roundtable meets quarterly discussing needs and alternative solutions.



- Over 11,000 oceangoing vessels annually move through the Lower Mississippi River
- 500 million tons of cargo
- Port of New Orleans No. 1 rubber, No. 2 coffee and No. 3 steel imports
- Port of South Louisiana No. 1 in tonnage




Port of New Orleans Refrigerated Terminal

140,000 sf warehouse,
able to store at least 35
million pounds of
product
Complete Fall 2011



New Links – Regional Transit Study



New Links

REIMAGINE OUR
TRANSIT NETWORK

[ANNOUNCEMENTS](#) [NETWORK PLAN](#) [PROJECT DOCUMENTS](#) [RELATED LINKS](#) [COMMENTS](#) [CONTACT](#) [PARTNER AGENCIES](#)


New Links is a planning project to re-imagine how public transit connects Orleans, Jefferson, and St. Bernard parishes. The goal of New Links is to propose a redesigned bus and streetcar network that makes public transportation work better for riders and the community.

The New Links planning team has developed a plan for a redesigned transit network based on feedback from riders and community members. View the final recommended plan below.


See our final recommendations for a redesigned regional transit network.

[View the Final Recommended Network ↴](#)

[Read the Report](#)



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COVID – 19 and New Partnerships

- Beyond Title VI analysis
- Louisiana Department of Health - sharing
- Defining Vulnerabilities – Environmental Justice Areas & Social Vulnerability Areas (SVI)



COVID – 19 – Perhaps some of our service industry such as restaurants were a bit more prepared - adopted meals on wheels quickly as we do post storms.

- Transportation changes over night – What are our new patterns?
- New Developments center on Warehousing for Distribution Centers – Environmental Concerns??



Manning family and Drago's seafood restaurant show support for Tulane Health System employees

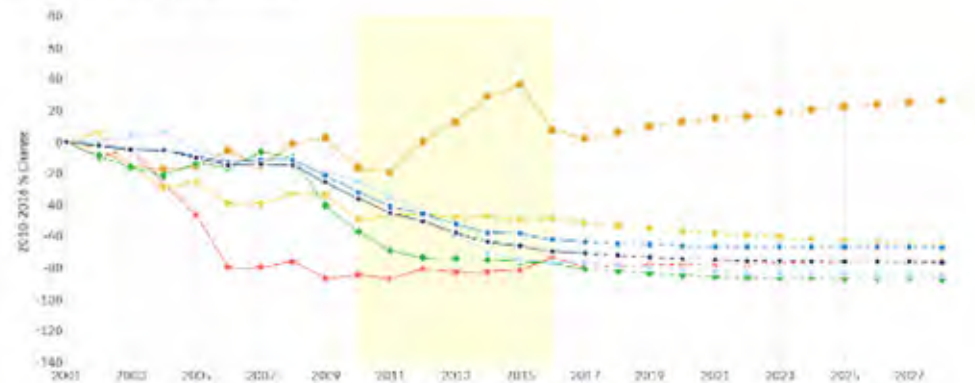
[Tulane Medical Center](#)

April 08, 2020

Much Greater Emphasis on Economic Recovery & Changing Patterns Post-Covid



Industry Change Summary



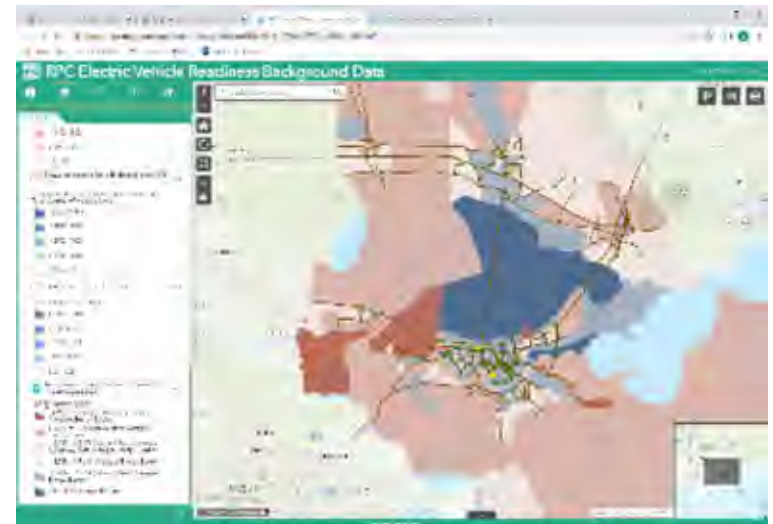
| Region | 2010 Jobs | 2016 Jobs | Change | % Change | 2017 Average Earnings | 2017 Payrolled Business Locations |
|--------------------------|-----------|-----------|--------|----------|-----------------------|-----------------------------------|
| ● S. Parish Region | 11,071 | 5,231 | -5,840 | -53% | \$82,590 | 287 |
| ■ New Orleans MSA | 12,103 | 6,704 | -5,399 | -45% | \$84,804 | 318 |
| ▲ Jefferson Parish, LA | 7,443 | 2,292 | -5,151 | -69% | \$80,693 | 110 |
| ◆ Orleans Parish, LA | 2,133 | 1,125 | -1,008 | -47% | \$91,050 | 61 |
| ✦ Plaquemines Parish, LA | 471 | 479 | 8 | 2% | \$83,621 | 22 |
| ✦ St. Bernard Parish, LA | 40 | 67 | 27 | 68% | \$81,225 | 13 |
| ✦ St. Tammany Parish, LA | 985 | 1,268 | 283 | 29% | \$79,252 | 81 |

Coordination with Argonne Labs on Energy Burden Mapping



Issue 1 | Released January 2022

RPC is a partner of the Southeast Louisiana Council of Economic Bases.
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https://www.norpc.org/mapping-resources/?filter_mapping_resource_category=interactive-maps

2020 and 2021 Hurricanes



NHC – A USGS water level station near Ocean Springs, Mississippi, measured a peak water level of 10.88 ft NAVD88, which suggests (when converted) a peak inundation of 9-10 ft above ground level in this area from Hurricane [#Zeta](#).

October 2020



Hurricane Ida 2021

- According to the NHC, Ida was a **dangerous Category 4 hurricane with maximum winds of 150 mph**. Ida's storm surge was 9 to 14 feet above normally dry ground on the East Bank of the Mississippi River and 6 to 12 feet on the West Bank, including in Jefferson, Lafourche, and Plaquemines Parishes, Louisiana.



Online Assets and State-level Data

- LDH – data affecting health and vulnerabilities
- Broadband efforts state-wide
- Demographic Socio-economic profiles of all types
- Basic data availability online (processed in tables and mapping formats) and increased standardization
- https://www.norpc.org/mapping-resources/?filter_mapping_resource_category=gis-layers
- https://www.norpc.org/resource-library/?fwp_categories=tables-and-graphs

Data delivered to each parish March 2022



| CLASS NAME | GlobalID |
|----------------------|----------------|
| Water | 0 0.00 |
| Urban/Developed Land | 1 144,144,144 |
| Developed Open Space | 2 144,144,144 |
| Open Land | 3 144,144,144 |
| Wetland | 4 144,144,144 |
| Wetland | 5 144,144,144 |
| Wetland | 6 144,144,144 |
| Wetland | 7 144,144,144 |
| Wetland | 8 144,144,144 |
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| Wetland | 20 144,144,144 |
| Wetland | 21 144,144,144 |
| Wetland | 22 144,144,144 |
| Wetland | 23 144,144,144 |



<https://coast.noaa.gov/digitalcoast/data>
New Orleans Region NOAA Metadata

Sharing the funding for and development of Geospatial Resources - New Imagery coming soon – Juneish 2022 (leveraged on Hurricane IDA USDA contracting)
New LiDAR coming soon QL1 in coordination with USGS/NRCS LA DOTD – captured, in processing – fall 2022



Lynn Dupont GIS Manager, Principal Planner

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New Coffee Talk








We used to talk about what schools our children were planning to attend, now we talk about our BFE, our Flood Insurance and our Evacuation Plan and where our children are now living. Festivals have returned & the Food is amazing.

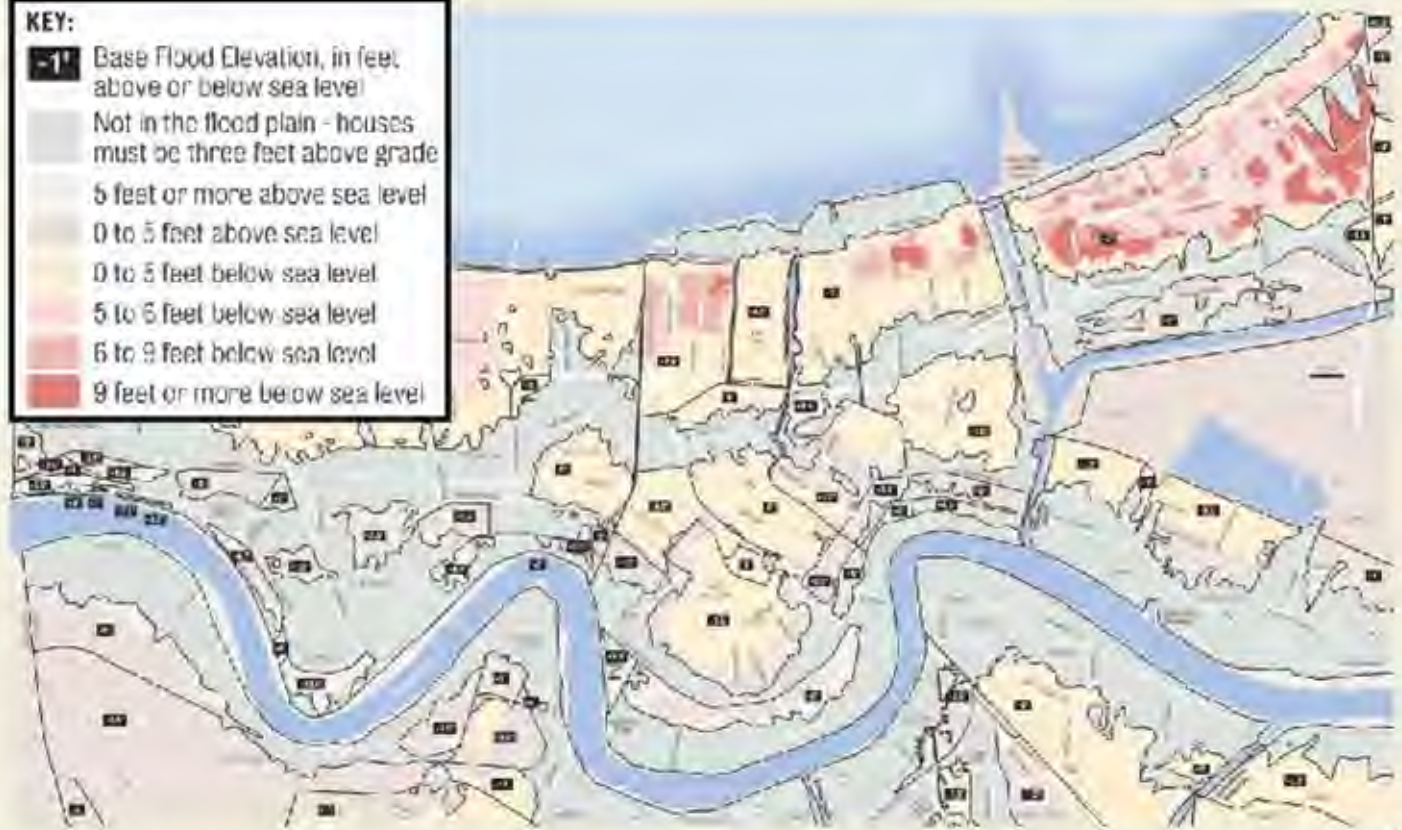


Elevations in the city of New Orleans

This map, from FEMA, shows the elevations in New Orleans in 2005. Which areas are lowest?

KEY:

-  Base Flood Elevation, in feet above or below sea level
-  Not in the flood plain - houses must be three feet above grade
-  5 feet or more above sea level
-  0 to 5 feet above sea level
-  0 to 5 feet below sea level
-  5 to 6 feet below sea level
-  6 to 9 feet below sea level
-  9 feet or more below sea level



Thank you for the information you have made
available to us – we are using it.

ldupont@norpc.org

